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Appl. No. 10/058,523

Amndt. dated December 18, 2003

Reply to Office action of October 16, 2003

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-7 and 11 remain in the application. Claims 1, 2, 6 and 11 have been amended. Claims 8-10 and 12 have been canceled.

In item 4 on page 2 of the above-identified Office action, claims 1, 2, 5-7, 10 and 12 have been rejected as being unpatentable over Murray, Jr. (U.S. Patent No. 5,391,887) under 35 U.S.C. § 103.

The rejection has been noted and the claims have been amended in an effort to even more clearly define the invention of the instant application. Support for the changes is found on page 6, line 23 to page 8, line 6 of the specification.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 (and correspondingly claim 6) calls for, inter alia:

- introducing a filler element (40) into one of a gap and a hollow space in a motor vehicle body, the one of the gap and the hollow space having a given dimension, the filler element being an element selected from the group consisting of a compressible sealing strip, an elastomeric filler

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element, a plastomeric filler element, an expansion element, and a dimensionally unstable body;

- providing a probe (30) of an ultrasonic testing unit (20, 30) such that the filler element (40) encloses the probe; and
- measuring the given dimension of the one of the gap and the hollow space by using the ultrasonic testing unit.

The patent to Murray, Jr. discloses a container 2 for storing hazardous waste material. The container has an elongated cylindrically shaped body 4 and a dome lid 6 or a cup lid 8. A weld 10 secures the dome lid 6 or the cup lid 8 to the container 4 (col. 8, lines 30-34). Fig. 37 details the weld region of the cup lid 8. The weld seal 10 is provided between the body 4 of the container and the side wall 186 of the cup lid 8. The cup lid 8 allows the inspection of the weld region 10 using inspection techniques based on ultrasonic through transmission or ultrasonic reflection.

More specifically, Murray, Jr. discloses the steps of:

- introducing a fluid (coupling fluid 190) into a gap or hollow space (gap between opposing inner wall surfaces 184 of cup lid 8; gap between outer wall surface 182 of cup lid 8 and inner wall of container 188), the gap or hollow space having a given dimension (distance between opposing inner wall surfaces 184 of cup lid 8; distance between outer wall

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surface 182 of cup lid 8 and wall surface of container 188), the fluid being an ultrasonic coupling fluid (col. 20, lines 66-68).

- providing a probe (ultrasonic transmitter/receiver 194) of an ultrasonic testing unit (20, 30) such that the fluid (coupling fluid 190) encloses the probe (ultrasonic transmitter/receiver 194).

The Examiner interprets the ultrasonic coupling fluid 190 of Murray, Jr. as a filler element. Applicant believes that the interpretation of an ultrasonic coupling fluid as a filler element is rather broad. However, even if the ultrasonic coupling fluid of Murray can be interpreted as a filler element, Murray, Jr. clearly does not disclose the step of introducing a filler element into a gap or hollow space in a motor vehicle body, the filler element being an element selected from the group consisting of a compressible sealing strip, an elastomeric filler element, a plastomeric filler element, an expansion element, and a dimensionally unstable body, as recited in amended claim 1 and correspondingly in amended claim 6.

Further, Murray, Jr. teaches the use of drilled holes 180 as built-in calibration defects. In other words, the dimensions of the drilled holes 180 are known. A hole 180 may for example be drilled such that it is one half of the size of a critical flaw size in the weld 10 (see col. 20, lines 56-61).

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The weld 10 is inspected by using an ultrasonic transmitter/receiver 194 (col. 21, lines 8-11). More specifically, Murray, Jr. teaches measuring the size of a flaw or defect in the weld 10 by comparing the size of the flaw in the weld to the size of a calibration defect (hole 180). Murray, Jr. does not measure the dimension of the drilled holes 180 and also does not measure the dimension of the space filled with the coupling fluid 190 namely the dimension of the gap between opposing inner wall surfaces 184 of the cup lid 8 or the dimension of the gap between the outer wall surface 182 of cup lid 8 and inner wall of container 188. Thus, Murray, Jr. also does not disclose the step of measuring the given dimension of the gap and or hollow space filled with the filler material, as defined in claim 1 and correspondingly in claim 6.

The subject matter of amended claims 1 and 6 is patentable over the teaching of Murray because Murray neither shows or suggests a filler element introduced into a gap or hollow space in a motor vehicle body, the filler element being an element selected from the group consisting of a compressible sealing strip, an elastomeric filler element, a plastomeric filler element, an expansion element, and a dimensionally unstable body, nor does Murray show or suggest measuring the given dimension of the gap and or hollow space filled with the filler material.

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Applicant also believes that the subject matter of amended claims 1 and 6 is patentable over a combination of the teachings of Murray, Jr. and Grahn (U.S. Reissued Patent No. RE37,065). In item 4 on page 2 of the office action, the Examiner takes the standpoint that the step of introducing a filler element into a gap as recited in claim 1 is disclosed by Murray's step of filling an ultrasonic coupling fluid 190 into the container 188 and the cup-lid 8. In other words, the Examiner interprets the ultrasonic coupling fluid 190 as the filler element recited in claim 1. In item 7 on page 5 of the Office action, the Examiner stated that Murray discloses a weld filler material. Thus, contrary to the Examiner's argument in item 4 on page 2 of the Office action, in item 7 of the Office action the Examiner interprets the weld seal 10 of Murray as the filler element of claim 1. The Examiner's argumentation with regard to the filler element recited in the claims seems to be contradictory because two elements with different properties and different functions (ultrasonic coupling fluid 190, weld seal 10) are alternatively used to show the filler element of claims 1 and 6.

In case, the Examiner takes the standpoint that the weld seal material 10 of Murray is to be interpreted as the filler element of claims 1 and 6, then it is clear that the prior art does not show or suggest a weld seal material that encloses a probe of an ultrasonic testing unit.

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Further, it is noted that the weld filler material of Grahn is preferably a copper-beryllium alloy having an elastic modulus of the order of 20 million psi, a thermal conductivity of 140 BTU/(ft.hr.°F.), and a melting temperature greater than 1,900°F (col 17. lines 1-5). Due to the entirely different material properties of alloys, such as copper beryllium alloys, and elastomers, such as gels or rubber compounds, and due to the different functions of the weld seal of Murray and the elastomer of Grahn it would not have been obvious to employ in Murray the elastomer of Grahn because these elements would not be recognized as equivalents. The subject matter of amended claims 1 and 6 is therefore patentable over the combination of Murray and Grahn.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1 or 6. Claims 1 and 6 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 1 or 6, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-7 and 11 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, he is respectfully requested to telephone counsel so that, if possible, patentable language can be .

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worked out. In the alternative, the entry of the amendment is requested as it is believed to place the application in better condition for appeal, without requiring extension of the field of search.

Please charge any fees which might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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